The Herschel Mission: Overview and Observing Opportunities

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The Herschel Space Observatory (formerly known as FIRST) is the fourth cornerstone mission in the European Space Agency (ESA) science program. It will perform imaging photometry and spectroscopy in the far infrared and submillimeter part of the spectrum, covering approximately the 55–650 micron range. The key science objectives emphasize current questions connected to the formation of galaxies and stars, however, having unique observing capabilities, Herschel will be a facility available to the entire astronomical community. Herschel will carry a 3.5 meter diameter passively cooled telescope. The science payload complement - two cameras/medium resolution spectrometers (PACS and SPIRE) and a very high resolution heterodyne spectrometer (HIFI) - will be housed in a superfluid helium cryostat. The ground segment will be jointly developed by ESA, the three instrument teams, and NASA/IPAC. Herschel will be launched in 2007. Once operational, Herschel will offer a minimum of 3 years of routine observations; roughly 2/3 of the available observing time is open to the general astronomical community through a standard competitive proposal procedure. I intend to report on the current implementation status of the various elements that together make up the Herschel mission, and to introduce the mission from the perspective of the prospective user of this major facility.

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